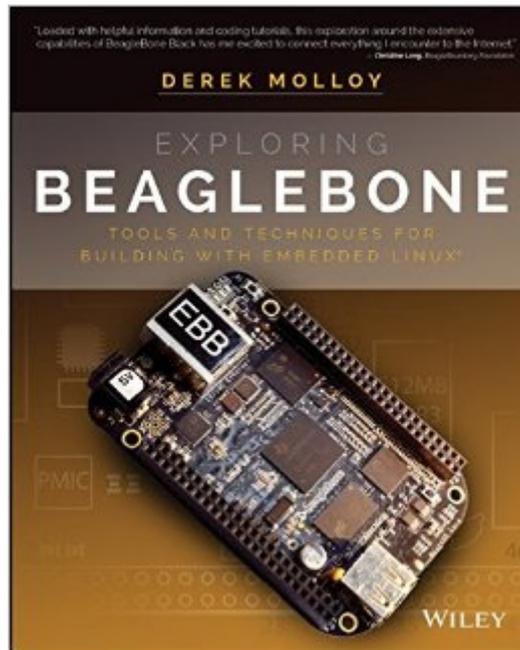# Exploring BeagleBone: Tools And Techniques For Building With Embedded Linux

## Synopsis

In-depth instruction and practical techniques for building with the BeagleBone embedded Linux platformExploring BeagleBone is a hands-on guide to bringing gadgets, gizmos, and robots to life using the popular BeagleBone embedded Linux platform. Comprehensive content and deep detail provide more than just a BeagleBone instruction manual--you'll also learn the underlying engineering techniques that will allow you to create your own projects. The book begins with a foundational primer on essential skills, and then gradually moves into communication, control, and advanced applications using C/C++, allowing you to learn at your own pace. In addition, the book's companion website features instructional videos, source code, discussion forums, and more, to ensure that you have everything you need.The BeagleBone's small size, high performance, low cost, and extreme adaptability have made it a favorite development platform, and the Linux software base allows for complex yet flexible functionality. The BeagleBone has applications in smart buildings, robot control, environmental sensing, to name a few; and, expansion boards and peripherals dramatically increase the possibilities. Exploring BeagleBone provides a reader-friendly guide to the device, including a crash course in computer engineering. While following step by step, you can:Â Get up to speed on embedded Linux, electronics, and programmingMaster interfacing electronic circuits, buses and modules, with practical examplesExplore the Internet-connected BeagleBone and the BeagleBone with a displayApply the BeagleBone to sensing applications, including video and soundExplore the BeagleBone's Programmable Real-Time ControllersHands-on learning helps ensure that your new skills stay with you, allowing you to design with electronics, modules, or peripherals even beyond the BeagleBone. Insightful guidance and online peer support help you transition from beginner to expert as you master the techniques presented in Exploring BeagleBone, the practical handbook for the popular computing platform. Visit the companion website for more information at exploringbeaglebone.com.

## Book Information

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## Customer Reviews

This is one of the best technical books I have read in 30 years. It should be used as curriculum at school, and maybe it is at Derek's college. I have been using BeagleBone since 2012, often in real world applications. Therefore, I was very familiar with Derek's youtube videos that often got me started on specific topics about the board features.But this book goes way beyond the mere usage of a product, it's a full multidisciplinary workshop on electronics, physical computing, networking, and process control. As efficacy, I put this guy at the same level as a W.Bolton or a S.Gibilisco, plus the monumental collateral (and free) material posted on his website and youtube channel.Were I 20 years younger, I would spend a semester in Dublin just to go to Derek's classes...

If you want to get the most out your Beagle Bone Black this is the book! This is also a very up-to-date book on implementing "embedded Linux". There is a short introduction on Nodejs and Bonescript, but Bonescript is left behind for C/C++ programming of the BBB. Command line as well as IDEs are covered, including "cross-compiling".I've gone through quite a few of the examples, and it's amazing how quickly you can get up to speed on using serious embedded design tools. I don't remember going through a "how to" type process at such high speed. It's because it is all well explained, and it all works! A "C" version BBB with Debian installed is recommended.The book is only the beginning. The author has a chapter-by-chapter website with loads of supplementary material. This makes this book an incredible bargain! High recommended.

I concur with Russell - this is one of the best Beaglebone books I had seen. It takes you from the very beginning to farther than many will likely go. It is substantially supported by online reference material as well from both the author and other sites. It supports the Debian distro, which many of the other books out there do not. If you are getting only one Beaglebone book - this is the one to get.

I have always enjoyed prof. Molloy's video tutorials. So when I saw this book published, I purchased

both kindle and physical book version. Range of Topics this book covers is huge. Although the focus of the book is Beaglebone, this is a book about modern day electronics and micro controller embedded system. Instant classic.

This is the best embedded Linux book available. It sets a new standard. The scope and real world practicality of the coverage is unequaled. I was drawn to the book for it's embedded Debian Linux on ARM coverage, which is useful for other platforms in addition to the BeagleBone Black.I purchased BBB hardware so I could follow along with the book, and am enjoying that platform which I might not otherwise have explored. I understand now why the author chose the BBB instead of the more popular Raspberry Pi as the focus for his book (greater GPIO capacity), but really, most of the knowledge imparted in this book applies to any embedded ARM platform running Debian Linux.I would say this book is for intermediate to advanced users. I would not recommend that the typical novice begin with this book alone. But there are a great many books for novices in the embedded Linux IoT maker space, and what we need is more advanced treatment for engineers who do this for a living to build products. If you have experience with Linux and embedded hardware, and are already reasonably well grounded in C/C++, there is no finer book available to broadly survey the embedded Linux software and hardware landscape, increase your knowledge, and sharpen your skills.I hope the author is encouraged by the enthusiastic reception and success this first book has achieved, and is hard at work on his next book.

This is the best dam book I have bought in a very long time!I honestly had my doubts when I ordered it, because so many times with other books like this the author assumes you know a topic and they dive in somewhere in the middle and continue on leaving you thinking what the hell.This book is not like that at all. He is a very good teacher on the subject. Very easy to follow along and perform the tasks.So far has covered everything I had been wanting to do, and so far they all have worked like a charm.I will say that this does not just limit you to the BBB. I have an ODROID-C1 which I have used these examples and things are working just the same.I have never recommended a book before, This is a book that every Embedded Linux person should have!

I came to this book the back way. I was looking for sample beaglebone code in C and I found the author's github with the example programs from the book along with revisions and supplemental programs. I noticed that the author was very responsive answering questions about the code. I know enough that between the files on github and the back and forth with questions I was able to

work along each chapter but I wanted to support what the author is doing.Now that I have the book I can tell it's a rare treat; the illustrations are beautiful the writing is clear. I look forward to the authors future work.

Exploring BeagleBone: Tools and Techniques for Building with Embedded Linux LINUX: Linux Command Line, Cover all essential Linux commands. A complete introduction to Linux Operating System, Linux Kernel, For Beginners, Learn Linux in easy steps, Fast! A Beginner's Guide Linux: Linux Guide for Beginners: Command Line, System and Operation (Linux Guide, Linux System, Beginners Operation Guide, Learn Linux Step-by-Step) Linux: Linux Mastery. The Ultimate Linux Operating System and Command Line Mastery (Operating System, Linux) Getting Started with BeagleBone: Linux-Powered Electronic Projects With Python and JavaScript Linux for Embedded and Real-time Applications, Third Edition (Embedded Technology) Linux for Embedded and Real-time Applications (Embedded Technology) Linux for Embedded and Real-time Applications, Second Edition (Embedded Technology) Exploring Raspberry Pi: Interfacing to the Real World with Embedded Linux DSP Software Development Techniques for Embedded and Real-Time Systems (Embedded Technology) Building Embedded Linux Systems Linux Clustering: Building and Maintaining Linux Clusters Exploring Arduino: Tools and Techniques for Engineering Wizardry The Everything Ghost Hunting Book: Tips, Tools, and Techniques for Exploring the Supernatural World (Everything®) BeagleBone Cookbook: Software and Hardware Problems and Solutions Essential System Administration: Tools and Techniques for Linux and Unix Administration Essential System Administration: Tools and Techniques for Linux and Unix Administration, 3rd Edition BeagleBone Robotic Projects The BeagleBone Black Primer BeagleBone For Dummies